

What is claimed is:

1. A plurality of non-human vertebrate animal cell line comprising germline-competent black C57 ES cell lines, including IC1, or IC2.
2. A plurality of non-human vertebrate animal cell line comprising germline-competent albino C57 ES cell lines, including IAC1, IAC2, IAC3, IAC4, IAC5, IAC6, IAC7 or IAC8.
3. A method of generating genetically modified non-human vertebrate animal, wherein said animal is produced by crossing the same strain of the animal with each other.
4. A method of producing a genetically modified non-human animal, said method comprising the steps of:
  - a) introducing genetic modification in ES cells to produce modified ES cells,
  - b) introducing said modified ES cells into blastocysts from the same strain or substrains and transplanting said blastocysts into a pseudopregnant animal,
  - c) allowing said blastocyst to develop into chimeras and screening the chimerism by PCR and Southern Blot, and
  - d) breeding said chimeras to produce offspring.
5. A method of making a genetically modified mouse model, said method comprising the steps of:
  - a) introducing genetic modification in mouse ES cells,
  - b) introducing said ES cells into mouse blastocysts from the same strain or substrains and transplanting said blastocysts into a pseudopregnant mouse,
  - c) allowing said blastocyst to develop into a chimeric mouse and screening the chimerism by PCR and Southern Blot, and
  - d) breeding said chimeric mouse to produce genetically modified offspring.

6. The method of claim 4 wherein C57 ES cells are introduced into C57 black blastocysts to produce a black in black combination.
7. The method of claim 4 wherein genetically modified C57 ES cells are introduced into albino C57 blastocysts to produce a black in white combination.
8. The method of claim 4 wherein albino C57 ES cells are introduced into C57 blastocysts to produce a white in black combination.
9. The method of claim 5 wherein C57 ES cells are introduced into C57 black blastocysts to produce a black in black combination.
10. The method of claim 5 wherein C57 ES cells are introduced into albino C57 blastocysts to produce a black in white combination.
11. The method of claim 5 wherein albino C57 ES cells are introduced into C57 blastocysts to produce a white in black combination.